

CURRICULUM VITAE

Name: Soumyajit Majumdar

Position: Associate Dean for Research and Graduate Programs, School of Pharmacy
Professor, Pharmaceutics and Drug Delivery
Research Professor, Research Institute of Pharmaceutical Sciences
Associate Director, Pii Center for Pharmaceutical Technology
Co-Director Hands-on Course in Tablet Technology

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The University of Mississippi
University, MS, 38677.

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Education: Bachelor of Pharmacy, 1989
Jadavpur University, Calcutta, India

Master of Pharmacy, 1991
Jadavpur University, Calcutta, India

Doctor of Philosophy, 2005
Pharmaceutical Sciences and Pharmacology
University of Missouri-Kansas City, MO, USA.

PROFESSIONAL EXPERIENCE

2/18 – to date Organization: **TranZ Biosciences LLC.**
Title: Managing Member

7/16 – to date Organization: **The University of Mississippi**
Title: *Professor, Department of Pharmaceutics, School of Pharmacy and Research Professor, RIPS*

3/15 - to date Organization: **The University of Mississippi**
Title : *Associate Dean for Research and Graduate Programs*

7/12 – to date Organization: **The University of Mississippi**
Title : *Associate Director, Pii Center for Pharmaceutical Technology*

7/11 – 6/16 Organization: **The University of Mississippi**
Title : *Associate Professor, Department of Pharmaceutics, School of Pharmacy and Research Associate Professor, RIPS*

7/05 – 6/11 Organization: **The University of Mississippi**
Title : *Assistant Professor, Department of Pharmaceutics, School of Pharmacy. and Research Assistant Professor, RIPS*

6/99 to 7/00: Company: **Orchid Healthcare, Chennai, India**
Title: *Deputy Manager Formulation Development*

5/97 to 6/99 Company: **Novartis Enterprises Pvt. Ltd. Mumbai, India**
Title: *Senior Executive (Group Leader) Research and*

Development

93 to 4/97	<u>Title:</u>	<i>Executive, Research and Development (Sandoz India Ltd. which became Novartis)</i>
4/92 to 93	<u>Title:</u>	<i>Production Officer (Sandoz India Ltd.)</i>
6/91 to 4/92	<u>Title:</u>	<i>Management Trainee, Manufacturing (Sandoz India Ltd.)</i>

ACHIEVEMENTS:

AWARDS / HONORS

Lipid-based Drug Delivery Outstanding Researcher Award 2014, Lipid based drug delivery focus group, American Association of Pharmaceutical Scientists.

Pharmaceutical Sciences Teacher of the Year Award, The University of Mississippi. (2013-2014)

Bachelor of Science in Pharmaceutical Sciences Teacher of the Year, The University of Mississippi, 2011-2012

New Investigator Research Award, The University of Mississippi, 2010-2011

Associates Grant Award. The University of Mississippi, 2007 – 2008

Faculty Research Fellowship Award, The University of Mississippi, 2006 – 2007

AAiPS Research Award, 2004, from American Association of Indian Pharmaceutical Scientists (AAiPS).

School of Graduate Studies Distinguished Dissertation Fellowship Award, University of Missouri-Kansas City (UMKC), 2004-2005.

Dean's Doctoral Scholar Fellowship, UMKC, 2003-2004

Outstanding Leadership Award in 2003 from School of Pharmacy, UMKC.

Outstanding Leadership Award in 2002 from School of Pharmacy, UMKC.

Chancellor's Non-Resident (CNR) Award, UMKC, 2000 – 2005.

University gold medal - M.S. program in the Division of Pharmaceutical Technology, Jadavpur University, Calcutta, India.

Scholarship from the University Grants Commission (Govt. of India) for the duration of the M.S. program (1989-1991).

ACADEMIC EXPERINCE

COURSES TAUGHT

- PHAR 331, Basic Pharmaceutics (3 Credit hours), Course Director
- PHAR 433, Industrial Pharmacy (Elective; 2 Credit hours), Course Director
- PHAR 660, Advanced Pharmacokinetics (3 Credit hours), Course Director

- PHAR 541 (2 Credit hours), Course Director
- PRCT 353 (2 Credit hours), Skills Lab I Course co-Instructor (about 30% course load)
- PHAR 649 – Product Development (3 Credit hours), Course Instructor
- PHAR 434, Biopharmaceutics and Pharmacokinetics, 2005-2006 Spring (3 Credit hours)
Co-Instructor (30% course load)

RESEARCH GRANTS

Current Projects

P30 GM122733-01A1 08/2018 – 05/2023
 Center of Research Excellence in Natural Product Neuroscience
 Program Director: **S. Majumdar**
 Agency: NIH/NIGMS
Total Budget: Approx. \$ 5,347,319

1R01EY022120-01A1 03/2015 – 02/2020
 Evaluation and Inhibition of Efflux Pumps Expressed on the Blood Ocular Barrier
 Principal Investigator: **S. Majumdar**
 Agency: NIH/NEI
Total Budget: \$ 1,489,470

Nemus Biosciences LLC (Majumdar, S) 09/2018–06/2019
 Ocular delivery of Delta-9 THC
 Agency: Nemus Biosciences LLC
 This project aims to develop ophthalmic formulations for delta-9 THC.
Total Budget: \$155,156

MRI: Acquisition of a Field-Emission Scanning Electron Microscope to support multidisciplinary research and education at the University of Mississippi
 Principal Investigator: **S. Majumdar**
 Agency: NSF
Total Budget: \$ 346,641

Completed Projects

P20 GM104932 Center of Research Excellence in Natural Product Neuroscience 09/2016 – 08/2017
 Program Director: **S. Majumdar**
 Agency: NIH/NIGMS
Total Budget: Approx. \$ 2,006,361
 University of MS Research Foundation 09/2012 – 08/2017
 Pii Center for Pharmaceutical Technology
 Principal Investigator: S. Majumdar
 Project Director: M.A. Repka

Total Budget: \$ 500,000

Fundamentals Studies in the Application of Low MW Klucel® and Hot-Melt Extrusion for the Oral Delivery of Insoluble Drugs from Tablets, Capsules and Oral Film Dosage Forms

Principal Investigator: M. A. Repka

01/2010-12/2014

Co-PI: **S. Majumdar**

Agency: Ashland Aqualon

Type: Research Contract

Total Budget: \$ 187,440

Properties of HME Extruded Films containing Kollidon® VA-64 and New Polymer, Soluplus®

01/2010 - 12/2014

Principal Investigator: M. A. Repka

Co-PI: **S. Majumdar**

Agency: BASF SE

Type: Research Contract

Total Budget: \$ 146,349

1R41AI108113-01

08/2013 – 07/2015

Program Director: ElSohly M.A,

Project PI: ElSohly M.A, Majumdar S

Orally Active Formulations of DHA Dimers for the treatment of Infectious Diseases

Agency: NIH/NIAID

Total Budget: \$ 205,514

1R41EY020042-01A1 Development of Tetrahydrocannabinol prodrugs for topical treatment of Glaucoma”

03/2011-02/2013

Principal Investigator at Research Institution: **S. Majumdar**

Agency: NIH/NEI

Total Budget: \$ 136,479

Technology Commercialization Initiative Fund

04/2013 – 09/2013

Controlled Release Ophthalmic Formulations

Principal Investigator of Project: **S. Majumdar**

Total Budget: \$ 15,000

Center for Thermal Pharmaceutical Processing (CTP2) Phase III

09/2010 - 08/2013

Principal Investigator: M.A. Repka

Co-Principal Investigator: **S. Majumdar**

Agency: DHHS

Total Budget: \$ 594,000

2 R42 GM067304-02 (ElSohly) NIH/NIGMS

06/2008 – 05/2012

Project Title: Transmucosal Intra-Oral Drug Delivery System for THC

Co-Principal Investigator: **S. Majumdar**

Total Budget: \$ 745,161

Supplement to 2 R42 GM067304-02 (ElSohly) NIH/NIGMS 06/2008 – 05/2012
Project Title: Transmucosal Intra-Oral Drug Delivery System for THC
Co-Principal Investigator: **S. Majumdar**
Total Budget: \$ 142,200

Hot-Melt Extrusion Feasibility Studies for AR-12: 09/2010 - 02/2011
Preformulation and Accelerated Stability
Co-Investigator: **S. Majumdar**
Other Involvement: REPKA, MICHAEL A - Principal investigator
Award Type: Business and Industry
Granting Agency: Other
Total Budget: \$ 40,316

Center for Thermal Pharmaceutical Processing Phases I & II 09/2008 - 08/2011
(Health Resources and Services Administration) (Repka, M.A)
Co-Principal Investigator: **S. Majumdar**
Total Budget: \$ 895,850

R21 EY18426-01 NIH/NEI 09/2007-02/2010
Localized modulation of RPE P-gp/MRP activity for back-of-the-eye drug delivery.
Principal Investigator: **S. Majumdar**
Total Budget: \$ 209,829

Small Grant Project (**Majumdar, S**) 07/2007 – 06/2011
Awarded through NIH/NCRR grant award P20 RR021929 (Cutler) Center of Research
Excellence in Natural Products Neuroscience (CORE-NPN)
Small Grant Project Title: Vitreo-retinal hesperidin concentrations following topical or oral
administration
Principal Investigator: **S. Majumdar**
Total Budget: \$ 166,000

P20 RR021929 (Matsumoto/Cutler) NCRR/NIH 09/2006-09/2009
Center of Research Excellence in Natural Products Neuroscience (CORE-NPN)
Individual Project Proposal: “Characterization, Formulation and Evaluation of THC Pro-drugs
for Oral Transmucosal Delivery”
PI of Individual Project: Repka, M.A.
Co-PI of Individual Project: **Majumdar, S**
Total Budget: \$ 550,000

Oral Absorption of Hesperidin 3/27/06 – 4/26/06
Next Pharmaceuticals, Inc.
The major goal of this project was to research factors affecting oral absorption of hesperidin.
Principal Investigator: **S. Majumdar**
Total Budget: \$ 2,500

Berberine Project 10/07/05 – 12/06/05
Next Pharmaceuticals, Inc.

The major goal of this project was to study and improve dissolution of berberine.

Principal Investigator: **S. Majumdar**

Total Budget: \$ 12,500

PUBLISHED ARTICLES (PEER REVIEWED).

1. ***Functional Expression of a Sodium Dependent Nucleoside Transporter on Rabbit Cornea: Role in Corneal Permeation of Acyclovir and Idoxuridine.*** Soumyajit Majumdar, Sriram Gunda and Ashim K. Mitra. *Current Eye Research*. 2003 Mar-Apr;26(3-4):175-83.
2. ***Drug delivery to retina: challenges and opportunities.*** Sridhar Duvvuri, Soumyajit Majumdar and Ashim K. Mitra. *Expert Opinion on Biological Therapy*. 2003 Feb;3(1):45-56.
3. ***Functional Differences in Nucleoside and Nucleobase Transporters Expressed on the Rabbit Corneal Epithelial Cell Line (SIRC) and Isolated Rabbit Cornea.*** Soumyajit Majumdar, Giridhar S. Tirucherai, Dhananjay Pal and Ashim K. Mitra. *AAPS PharmSci*. 2003;5(2):E15.
1. ***Expression of Peptide Transporters on Rabbit Retina: A Strategy to Improve Retinal Delivery of Ganciclovir.*** Soumyajit Majumdar, Sreeraj Macha, Yasser Nashed and Ashim K. Mitra. *Letters in Drug Design and Discovery*. 2004;1(1):73-77.
5. ***Membrane Transporter / Receptor Targeted Prodrug Design: Strategies for Human and Veterinary Drug Development.*** Soumyajit Majumdar, Sridhar Duvvuri and Ashim K. Mitra. *Advanced Drug Delivery Reviews*. 2004; 56(10): 1437-1452.
6. ***Bioreversion And Oral Bioavailability Of The L-Valine Dipeptide Ester Prodrug Of Acyclovir, Val-Valacyclovir, In Sprague-Dawley Rats.*** Soumyajit Majumdar, Sridhar Duvvuri and Ashim K. Mitra. *Clinical Research and Regulatory Affairs*. 2004; 21(1); 67 – 79.
7. ***Circumventing P-gp mediated cellular efflux of quinidine by prodrug derivatization.*** Ritesh Jain, Soumyajit Majumdar, Dhananjay Pal and Ashim K. Mitra. *Molecular Pharmaceutics*. 2004; 1(4); 290-299.
8. ***Mechanism of Ganciclovir Uptake by Rabbit Retina and Human Retinal Pigmented Epithelium Cell Line, ARPE-19.*** Soumyajit Majumdar, Sreeraj Macha, Dhananjay Pal and Ashim K. Mitra. *Current Eye Research*. 2004 Aug-Sep;29(2-3):127-36.
9. ***Role of Metabolism in Ocular Drug Delivery.*** Sridhar Duvvuri, Soumyajit Majumdar and Ashim K. Mitra. *Current Drug Metabolism*. 2004 Dec;5(6):507-15.
10. ***Functional Activity of a Monocarboxylate Transporter, MCT1, in the Human Retinal Pigmented Epithelium Cell Line, ARPE-19.*** Soumyajit Majumdar, Sriram Gunda, Dhananjay Pal and Ashim K. Mitra. *Molecular Pharmaceutics*. 2005 Mar-Apr;2(2):109-17.
11. ***Evasion of P-gp Mediated Cellular Efflux and Permeability Enhancement of HIV-Protease Inhibitor Saquinavir by Prodrug Modification.*** Ritesh Jain, Sheetal Agarwal, Soumyajit Majumdar, Xiadang Zhu, Dhananjay Pal and Ashim K. Mitra. *International Journal of Pharmaceutics*. 2005 Oct 13;303(1-2):8-19.
12. ***Dipeptide Monoester Ganciclovir Prodrugs for Treating HSV-1-induced Corneal Epithelial and Stromal Keratitis: In Vitro and In Vivo Evaluations.*** Soumyajit Majumdar, Yasser E. Nashed, Kunal Patel, Ritesh Jain, Motoki Itahashi, Donna M. Neumann, James M. Hill, and Ashim K. Mitra. *Journal of Ocular Pharmacology and Therapeutics*. 21(6):463-74; 2005.

13. ***Chemical modification and formulation approaches to elevated drug transport across cell membranes.*** Soumyajit Majumdar and Ashim K. Mitra. Expert Opinion on Drug Delivery. 2006. 3(4):511-27.
14. ***Vitreol pharmacokinetics of dipeptide monoester prodrugs of ganciclovir.*** Soumyajit Majumdar, Viral Kansara, and Ashim K. Mitra. J Ocul Pharmacol Ther. 2006, 22(4):231-41.
15. ***Approaches towards enhanced transepithelial drug delivery.*** Soumyajit Majumdar, and Ashim K. Mitra. Discovery Medicine. 2006, 6(36):229-33.
16. ***Formulation and evaluation of rapidly disintegrating fenoverine tablets: effect of superdisintegrant.*** Sunil Kumar Battu, Michael A. Repka, Soumyajit Majumdar and Madhusudan Rao Y. Drug Development and Industrial Pharmacy. 2007, 33(11):1225-32..
17. ***Effect of Chitosan, Benzalkonium Chloride and Ethylenediaminetetraacetic acid on Permeation of Acyclovir Across Isolated rabbit cornea.*** Soumyajit Majumdar, Ketan Hippalgaonkar and Michael A. Repka. International Journal of Pharmaceutics. 2008, 348(1-2):175-8.
18. ***Off-line and on-line measurements of drug-loaded hot-melt extruded films using Raman spectroscopy.*** Tumuluri VS, Kemper MS, Lewis IR, Prodduturi S, Majumdar S, Avery BA, Repka MA. International Journal of Pharmaceutics. 2008 Jun 5;357(1-2):77-84. Epub 2008 Feb 2.
19. ***Chemical stability and bioadhesive properties of an ester prodrug of Delta(9)-tetrahydrocannabinol in poly(ethylene oxide) matrices: Effect of formulation additives.*** Sridhar Thumma, Soumyajit Majumdar, Mahmoud A. ElSohly, Waseem Gul, Michael A. Repka. International Journal of Pharmaceutics. 2008 Oct 1;362(1-2):126-32. Epub 2008 Jul 5.
20. ***Preformulation Studies of a Prodrug of Delta(9)-Tetrahydrocannabinol.*** Sridhar Thumma, Soumyajit Majumdar, Mahmoud A. ElSohly, Waseem Gul, Michael A. Repka. AAPS PharmSciTech. 2008;9(3):982-90. Epub 2008 Aug 28.
21. ***Transcorneal Permeation of l- and d-Aspartate Ester Prodrugs of Acyclovir: Delineation of Passive Diffusion Versus Transporter Involvement.*** Soumyajit Majumdar, Tushar Hingorani, Ramesh Srirangam, Rama Sarma Gadepalli, John M. Rimoldi, and Michael A. Repka. Pharmaceutical Research. 2009 May;26(5):1261-9. PMID: PMC2664401
22. ***Solubility, Stability, Physicochemical Characteristics and In Vitro Ocular Tissue Permeability of Hesperidin: A Natural Bioflavonoid.*** Soumyajit Majumdar, Tushar Hingorani, Ramesh Srirangam. Pharmaceutical Research. 2009 May;26(5):1217-25. PMID: PMC2664388
23. ***Applications of Hot-Melt Extrusion for Drug Delivery.*** Michael A. Repka., Soumyajit Majumdar, Sunil Kumar Battu, Ramesh Srirangam, Sampada Upadhaye. Expert Opinion on Drug Delivery. 2008 Dec;5(12):1357-76
24. ***Vitreol Kinetics of Quinidine in Rabbits in the Presence of Topically Co-administered P-gp Substrates/Modulators.*** Soumyajit Majumdar, Ketan Hippalgaonkar, Ramesh Srirangam. Drug Metabolism and Disposition. 2009 Aug; 37(8):1718-25. PMID: PMC2712438
25. ***Evaluation of Active and Passive Transport Processes in Corneas Extracted from Preserved Rabbit Eyes.*** Soumyajit Majumdar, Tushar Hingorani, Ramesh Srirangam. Journal of Pharmaceutical Sciences. 2010 Apr;99(4):1921-30. PMC Journal-In Process.

26. **Potential of the bioflavonoids in the prevention/treatment of ocular disorders.** Soumyajit Majumdar, Ramesh srirangam. The Journal of Pharmacy and Pharmacology 2010 Aug;62(8):951-65.
27. **Preparation and Characterization of Inclusion Complexes of a Hemisuccinate Ester Prodrug of Δ^9 -Tetrahydrocannabinol with Modified Beta-Cyclodextrins.** Sampada Upadhye, Swapnil J Kulkarni, Soumyajit Majumdar, Mitchell A. Avery, Waseem Gul, Mahmoud A. ElSohly. AAPS PharmSciTech. 2010 Jun;11(2):509-17. Epub 2010 Mar 24.
28. **Interaction between Topically and Systemically Co-administered P-glycoprotein Substrates/Inhibitors: Effect on Vitreal Kinetics.** Ketan Hippalgaonkar, Ramesh Srirangam, Bharathi Avula, Ikhlas Khan, Soumyajit Majumdar. *In Press.* Drug Metabolism and Disposition.
29. **Passive asymmetric transport of hesperetin across isolated rabbit cornea.** Ramesh Srirangam, Soumyajit Majumdar. International Journal of Pharmaceutics. 2010 Jul 15;394 (1-2):60-7. Epub 2010 May 9
30. **Physicochemical Characterization of Berberine Chloride: A Perspective in the Development of a Solution Dosage Form for Oral Delivery.** Sunil Kumar Battu, Soumyajit Majumdar, Sindhuri Maddineni, Amar G. Chittiboyina, Mitchell A. Avery, and Michael A. Repka. AAPS PharmSciTech. 2010 Sep;11(3):1466-75. Epub 2010 Sep 15.
31. **Enhanced Solubility, Stability and Corneal Permeation of Delta-8-Tetrahydrocannabinol in the presence of Cyclodextrins.** Soumyajit Majumdar, Ketan Hippalgaonkar, Waseem Gul, Mahmoud A. ElSohly and Michael A. Repka. AAPS PharmSciTech. 2011 Jun;12(2):723-31. Epub 2011 Jun 3.
32. **Injectable lipid emulsions-advancements, opportunities and challenges.** Ketan Hippalgaonkar, Soumyajit Majumdar and Viral Kansara. AAPS PharmSciTech. 2010 Dec;11(4):1526-40. Epub 2010 Oct 26.
33. **Effect of ion pairing on in vitro transcorneal permeability of a $\Delta(9)$ -tetrahydrocannabinol prodrug: Potential in glaucoma therapy.** Tushar Hingorani, Waseem Gul, Mahmoud A Elsohly, Repka MA, Majumdar S. J Pharm Sci. 2012 Feb;101(2):616-26.
34. **Intravitreal Kinetics of Hesperidin, Hesperetin and Hesperidin G: Effect of Dose and Physicochemical Properties.** Ramesh Srirangam, Ketan Hippalgaonkar and Soumyajit Majumdar. J Pharm Sci. 2012 Apr;101(4):1631-8. doi: 10.1002/jps.23047. Epub 2012 Jan 6
35. **Stabilization of fenofibrate in low molecular weight hydroxypropylcellulose matrices produced by hot-melt extrusion.** Weibin Deng, Soumyajit Majumdar, Abhilasha Singh, Sejal Shah, Mohammed NN, Seongbong Jo, Elanor Pinto, Divya Tewari, Tom Durig, Michael A Repka. Drug Dev Ind Pharm. 2013 Feb;39(2):290-8. doi: 10.3109/03639045.2012.679280. Epub 2012 Apr 23
36. **Evaluation of the Intravenous and Topical Routes for Ocular Delivery of Hesperidin and Hesperetin.** Ramesh Srirangam, Ketan Hippalgaonkar, Bharathi Avula, Ikhlas A Khan, Soumyajit Majumdar. J Ocul Pharmacol Ther. 2012 Dec;28(6):618-27. doi: 10.1089/jop.2012.0040. Epub 2012 Jul 13.
37. **Kluce^l™ EF and ELF polymers for immediate-release oral dosage forms prepared by melt extrusion technology.** Mohammed NN, Majumdar S, Singh A, Deng W, Murthy NS, Pinto E, Tewari D, Durig T, Repka MA. AAPS PharmSciTech. 2012 Sep 8. [Epub ahead of print]

38. ***Indomethacin-loaded solid lipid nanoparticles for ocular delivery: development, characterization, and in vitro evaluation.*** Hippalgaonkar K, Adelli GR, Hippalgaonkar K, Repka MA, Majumdar S. *J Ocul Pharmacol Ther.* 2013 Mar;29(2):216-28. doi: 10.1089/jop.2012.0069. Epub 2013 Feb 19.
39. ***Phytochemicals in ocular health: Therapeutic potential and delivery challenges.*** Adelli GR, Srirangam R, Majumdar S. *World J Pharmacol* 2013; 2(1): 1
40. ***Development and characterization of taste masked Efavirenz pellets utilizing hot melt extrusion.*** A. Singh, S. Majumdar, W. Deng, N.N. Mohammed, A.G. Chittiboyina, V. Raman, S. Shah, M.A. Repka. *J. Drug Del. Sci. Tech.*, 23 (2) 157-163 2013
41. ***Ocular Disposition of the Hemiglutarate Ester Prodrug of Δ^9 -Tetrahydrocannabinol from Various Ophthalmic Formulations.*** Hingorani T, Adelli GR, Punyamurthula N, Gul W, Elsohly MA, Repka MA, Majumdar S. *Pharm Res.* 2013 Jun 5. [Epub ahead of print]
42. ***Formulation optimization of hot-melt extruded abuse deterrent pellet dosage form utilizing design of experiments.***, S. Maddineni, S. K. Battu, J. Morott, S. Majumdar, M. A. Repka, *Journal of Pharmacy and Pharmacology*, DOI: 10.1111/jphp.12129
43. ***Continuous manufacturing of solid lipid nanoparticles by hot melt extrusion. Patil H, Kulkarni V, Majumdar S, Repka MA. DOI 10.1016/j.ijpharm.2014.05.024.*** [Epub ahead of print]
44. ***Investigation of phase diagrams and physical stability of drug-polymer solid dispersions.*** Lu J, Shah S, Jo S, Majumdar S, Gryczke A, Kolter K, Langley N, Repka MA. *Pharm Dev Technol.* 2014 Aug 12:1-13. [Epub ahead of print]
45. ***Evaluation of the recrystallization kinetics of hot-melt extruded polymeric solid dispersions using an improved Avrami equation.*** Feng X, Ye X, Park JB, Lu W, Morott J, Beissner B, Lian ZJ, Pinto E, Bi V, Porter S, Durig T, Majumdar S, Repka MA. *Drug Dev Ind Pharm.* 2014 Sep 16:1-9. [Epub ahead of print]
46. ***Continuous Production of Fenofibrate Solid Lipid Nanoparticles by Hot-Melt Extrusion Technology: a Systematic Study Based on a Quality by Design Approach.*** Patil H, Feng X, Ye X, Majumdar S, Repka MA. *AAPS J.* 2014 Oct 25. [Epub ahead of print]
47. ***Influence of Process and Formulation Parameters on Dissolution and Stability Characteristics of Kollidon® VA 64 Hot-Melt Extrudates.*** Maddineni S, Battu SK, Morott J, Majumdar S, Murthy SN, Repka MA. *AAPS PharmSciTech.* 2014 Nov 1. [Epub ahead of print]
48. ***The effects of screw configuration and polymeric carriers on hot-melt extruded taste-masked formulations incorporated into orally disintegrating tablets.*** Morott JT, Pimparade M, Park JB, Worley CP, Majumdar S, Lian Z, Pinto E, Bi Y, Durig T, Repka MA. *J Pharm Sci.* 2015 Jan;104(1):124-34. doi: 10.1002/jps.24262. Epub 2014 Nov 19.
49. ***Stability-enhanced Hot-melt Extruded Amorphous Solid Dispersions via Combinations of Soluplus® and HPMCAS-HF.*** Alshahrani SM, Lu W, Park JB, Morott JT, Alsulays BB, Majumdar S, Langley N, Kolter K, Gryczke A, Repka MA. *AAPS PharmSciTech.* 2015 Jan 8. [Epub ahead of print]
50. ***Evaluation of topical hesperetin matrix film for back-of-the-eye delivery.*** Adelli GR, Hingorani T, Punyamurthula N, Balguri SP, Majumdar S. *Eur J Pharm Biopharm.* 2015 Feb 26. pii: S0939-6411(15)00087-9. doi: 10.1016/j.ejpb.2015.02.006. [Epub ahead of print]

51. ***Effect of Cyclodextrins on Morphology and Barrier Characteristics of Isolated Rabbit Corneas.*** Adelli GR, Balguri SP, Majumdar S. AAPS PharmSciTech. 2015 Mar 14. [Epub ahead of print]
52. ***Development of taste masked caffeine citrate formulations utilizing hot melt extrusion technology and in vitro-in vivo evaluations.*** Pimparade MB, Morott JT, Park JB, Kulkarni VI, Majumdar S, Murthy SN, Lian Z, Pinto E, Bi V, Durig T, Murthy R, H N S, Vanaja K, Kumar P C, Repka MA. Int J Pharm. 2015 Jun 20;487(1-2):167-76. doi: 10.1016/j.ijpharm.2015.04.030. Epub 2015 Apr 15.
53. ***Mefenamic acid taste-masked oral disintegrating tablets with enhanced solubility via molecular interaction produced by hot melt extrusion technology.*** Alshehri SM, Park JB, Alsulays BB, Tiwari RV, Almutairy B, Alshetaili AS, Morott J, Shah S, Kulkarni V, Majumdar S, Martin ST, Mishra S, Wang L, Repka MA. J Drug Deliv Sci Technol. 2015 Jun 1;27:18-27.
54. ***Influence of pressurized carbon dioxide on ketoprofen-incorporated hot-melt extruded low molecular weight hydroxypropylcellulose.*** Ashour E, Kulkarni V, Almutairy B, Park JB, Shah SP, Majumdar S, Lian Z, Pinto E, Bi V, Durig T, Martin ST, Repka MA. Drug Dev Ind Pharm. 2015 May 22:1-8. [Epub ahead of print]
55. ***Controlled release tablet formulation containing natural Δ^9 -tetrahydrocannabinol.*** Punyamurthula NS, Hingorani T, Adelli G, Gul W, ElSohly MA, Repka MA, Majumdar S. Drug Dev Ind Pharm. 2015 Dec 7:1-7. [Epub ahead of print]
56. ***Influence of Molecular Weight of Carriers and Processing Parameters on the Extrudability, Drug Release, and Stability of Fenofibrate Formulations Processed by Hot-Melt Extrusion.*** Alsulays BB, Park JB, Alshehri SM, Morott JT, Alshahrani SM, Tiwari RV, Alshetaili AS, Majumdar S, Langley N, Kolter K, Gryczke A, Repka MA. J Drug Deliv Sci Technol. 2015 Oct 1;29:189-198.
57. ***Investigation of the combined effect of MgO and PEG on the release profile of mefenamic acid prepared via hot-melt extrusion techniques.*** Alshehri SM, Tiwari RV, Alsulays BB, Ashour EA, Alshetaili AS, Almutairy B, Park JB, Morott J, Sandhu B, Majumdar S, Repka MA. Pharm Dev Technol. 2016 Jan 29:1-14. [Epub ahead of print]
58. ***Optimization of hot melt extrusion parameters for sphericity and hardness of polymeric face-cut pellets.*** Alshetaili AS, Almutairy BK, Alshahrani SM, Ashour EA, Tiwari RV, AlshehMA. Drug Dev Ind Pharm. 2016 Nov;42(11):1833-41. doi: 10.1080/03639045.2016.1178769
59. ***Hot melt extrusion as an approach to improve solubility, permeability and oral absorption of a psychoactive natural product, piperine.*** Ashour EA, Majumdar S, Alsheteli A, Alshehri S, Alsulays B, Feng X, Gryczke A, Kolter K, Langley N, Repka MA. J Pharm Pharmacol. 2016 Aug;68(8):989-98. doi: 10.1111/jphp.12579
60. ***Advances in the use of prodrugs for drug delivery to the eye.*** Taskar P, Tatke A, Majumdar S. Expert Opin Drug Deliv. 2017 Jan;14(1):49-63.
61. ***Topical ophthalmic lipid nanoparticle formulations (SLN, NLC) of indomethacin for delivery to the posterior segment ocular tissues.*** Balguri SP, Adelli GR, Majumdar S. Eur J Pharm Biopharm. 2016 Dec;109:224-235. doi: 10.1016/j.ejpb.2016.10.015.

62. ***Ocular Disposition of Δ 8-Tetrahydrocannabinol from Various Topical Ophthalmic Formulations.*** Punyamurthula NS, Adelli GR, Gul W, Repka MA, ElSohly MA, Majumdar S. AAPS PharmSciTech. 2017 Aug;18(6):1936-1945. doi: 10.1208/s12249-016-0672-2. Epub 2016 Nov 30.
63. ***Diclofenac sodium ion exchange resin complex loaded melt cast films for sustained release ocular delivery.*** Adelli GR, Prachetan SB, Bhagav P, Majumdar S. Drug Delivery. 2017 Nov;24(1):370-379. doi: 10.1080/10717544.2016.1256000.
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72. ***Ion-sensitive in situ hydrogels of natamycin bilosomes for enhanced and prolonged ocular pharmacotherapy: in vitro permeability, cytotoxicity and in vivo evaluation.*** Janga KY, Tatke A, Balguri SP, Lamichanne SP, Ibrahim MM, Maria DN, Jablonski MM, Majumdar S. Artif Cells Nanomed Biotechnol. 2018 Feb 23:1-12. doi: 10.1080/21691401.2018.1443117. [Epub ahead of print]
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- Janga KY, Tatke A, Shukla S, Lamichhane SP, Avula B, Wang X, Jablonski MM, Khan IA, Majumdar S. *J Pharm Sci.* 2018 Aug;107(8):2128-2135. doi: 10.1016/j.xphs.2018.04.008. Epub 2018 Apr 17
75. ***Formulation Development, Optimization, and In Vitro-In Vivo Characterization of Natamycin-Loaded PEGylated Nano-Lipid Carriers for Ocular Applications.*** Patil A, Lakhani P, Taskar P, Wu KW, Sweeney C, Avula B, Wang YH, Khan IA, Majumdar S. *J Pharm Sci.* 2018 Aug;107(8):2160-2171. doi: 10.1016/j.xphs.2018.04.014. Epub 2018 Apr 24.
 76. ***Curcumin-loaded Nanostructured Lipid Carriers for ocular drug delivery: Design optimization and characterization.*** Prit Lakhani, Akash Patil, Pranjal Taskar and Soumyajit Majumdar *Journal of Drug Delivery Science and Technology* 47(C):159-166 · July 2018.
 77. ***In Situ Gel of Triamcinolone Acetonide-Loaded Solid Lipid Nanoparticles for Improved Topical Ocular Delivery: Tear Kinetics and Ocular Disposition Studies.*** Tatke A, Dudhipala N, Janga KY, Balguri SP, Avula B, Jablonski MM, Majumdar S. *Nanomaterials (Basel).* 2018 Dec 27;9(1). pii: E33. doi: 10.3390/nano 9010033. PMID:30591688
 78. ***Challenges in the Polyene- and Azole-Based Pharmacotherapy of Ocular Fungal Infections.*** Lakhani P, Patil A, Majumdar S. *J Ocul Pharmacol Ther.* 2019 Jan/Feb;35(1):6-22. doi: 10.1089/jop.2018.0089. Epub 2018 Nov 8. PMID:30481082
 79. ***Gellan gum based sol-to-gel transforming system of natamycin transfersomes improves topical ocular delivery.*** Janga KY, Tatke A, Dudhipala N, Balguri SP, Ibrahim MM, Maria DN, Jablonski MM, Majumdar S. *J Pharmacol Exp Ther.* 2019 Mar 14. pii: jpet.119.256446. doi:10.1124/jpet.119.256446. [Epub ahead of print] PMID: 30872389
 80. ***Melt-Cast Films Significantly Enhance Triamcinolone Acetonide Delivery to the Deeper Ocular Tissues.*** Tatke A, Dudhipala N, Janga KY, Soneta B, Avula B, Majumdar S. *Pharmaceutics.* 2019 Apr 2;11(4). pii: E158. doi:10.3390/pharmaceutics11040158. PMID: 30987011
 81. ***Analog Derivatization of Cannabidiol for Improved Ocular Permeation.*** Taskar P, Adelli G, Patil A, Lakhani P, Ashour E, Gul W, ElSohly M, Majumdar S. *J Ocul Pharmacol Ther.* 2019 Apr 18. doi: 10.1089/jop.2018.0141. [Epub ahead of print] PMID:30998110

BOOK CHAPTER

Transcleral Drug Delivery To The Posterior Segment Of The Eye: Particulate And Colloidal Formulations And Biopharmaceutical Considerations. Ramesh Srirangam and Soumyajit Majumdar. "Advances in Ocular Drug Delivery". Edited by Dr. Ashim K. Mitra. Publisher: Research Signpost and Transworld Research Network.
<http://www.trnres.com/ebookcontents.php?id=121>

Recent patents and regulatory aspects on ophthalmic drug delivery systems. Soumyajit Majumdar, Ketan Hippalgaonkar, Tushar Hingorani, Walter G. Chambliss. "Treatise on Ocular Drug Delivery", Edited By: Dr. Ashim K. Mitra, ISBN: 978-1-60805-175-5.

Ocular Delivery of Tetrahydrocannabinol. Goutham R. Adelli, Prakash Bhagav, Michael A. Repka, Mahmoud A. ElSohly, Soumyajit Majumdar “The Handbook of Cannabis and Related Pathologies.”. *In Press*

PATENTS

“Amino acid ester derivatives of bioactive compounds, and di-, tri, and tetra-peptide ester derivatives of bioactive compounds, for therapy”. **U.S. Patent 7,214,664 B2.**

“Peptidyl prodrugs that resist P-glycoprotein mediated drug efflux” **US 7910553 B2**

“Compositions Containing Delta-9-THC-Amino Acid Esters and Process of Preparation.” **US8809261 B2; US9630941 B2; CA2741862C; DK2352497T3; EP2352497B1; ES2622582T3;**

“Biologically active cannabidiol analogs”. **WO2017132526A1**

INVITED TALKS

Formulation approaches to enhance topical delivery of Triamcinolone Acetonide. Symposium: Vision Florida 2019. University of South Florida. January 24-25, 2019

Taking on the challenge of Formulation: International Cannabinoid Derived Pharmaceuticals Summit. Workshop Leader. Boston. December 10, 2018.

Thermally processed topical ophthalmic films for improved ocular drug delivery. Symposium: Recent Trends in Vision and Ophthalmic Drug Delivery. University of South Florida, Sep 2017.

Drug Delivery to the Posterior Segment Ocular Tissues. Seminar series, Harrison School of Pharmacy, Auburn University, Auburn, February 21, 2017.

Topical ocular delivery of antimicrobials – challenges and opportunity. Research in Ophthalmology and Vision Sciences 2016 Seminar Series. Department of Ophthalmology, University of Mississippi Medical Center, June 2016

Noninvasive formulation strategies to increase ocular bioavailability. Ophthalmology Grand Rounds. Department of Ophthalmology, University of Mississippi Medical Center, Feb 2016

Can lipid carriers be the future of non-invasive ophthalmic drug delivery. AAPS Annual Meeting. Orlando, FL. 2015

Lipid based drug delivery. Lipid based drug delivery focus group. Lipid Based Drug Delivery Focus Group. AAPS Annual Meeting, San Diego, 2014

Preformulation Testing and Techniques and Early Tablet Formulation Development. Hands-on Course in Tablet Technology, University of Mississippi, Mississippi, June 2, 2014.

Preformulation Testing and Techniques and Early Tablet Formulation Development. Hands-on Course in Tablet Technology, University of Mississippi, Mississippi, March 3, 2014.

Preformulation Testing and Techniques and Early Tablet Formulation Development. Hands-on Course in Tablet Technology, University of Mississippi, Mississippi, September 23, 2013.

Modulation of Efflux Activity of P-Glycoprotein Expressed on the Retinal Pigmented Epithelium - Impact on Ocular Drug Delivery. Asia-ARVO 2009, Hyderabad, India. January 17, 2009

Developing Liquid Modified Release Dosage Forms: Preformulation and Formulation Considerations. AAPS Annual Meeting, Washington DC, 2011

PRESENTATIONS:

AAPS (Association of Pharmaceutical Scientists)

1. Effective Modulation of P-gp Activity in the Blood Ocular Barriers by Topically Administered Specific Inhibitors Improved Blood-Ocular Penetration of Anticancer Drug. Karthik Yadav Janga, Corinne Sweeney, Akshaya Tatke, Bhavik Soneta, Narendar Dudhipala, Bharathi Avula, XiangDi Wang, Monica M. Jablonski, Soumyajit Majumdar. University of Mississippi, AAPS annual meeting and exposition. 2018 held at Walter E Washington convention center, Washington DC, USA.
2. MRP1 Efflux Protein expression restricts the penetration of Methotrexate across the blood ocular barriers: Effect of specific inhibitors. Karthik Yadav Janga, Samir Sennapati, Akshaya Tatke, Bhavik Soneta, Corinne Sweeney, Narendar Dudhipala, Bharathi Avula, XiangDi Wang, Monica M. Jablonski, Soumyajit Majumdar. University of Mississippi, AAPS annual meeting and exposition. 2018 held at Walter E Washington convention center, Washington DC, USA.
3. Combination polymeric matrix films for sustained ocular delivery of Triamcinolone Acetonide – Development and physico-chemical evaluation. Akshaya Tatke, Karthik Yadav Janga, Bhavik Soneta, Soumyajit Majumdar. University of Mississippi, AAPS annual meeting and exposition. 2018 held at Walter E Washington convention center, Washington DC, USA.
4. Preparation and evaluation of lipid-based formulations for primaquine delivery: A comparison of solid lipid nanoparticles (SLN), nanostructured lipid carriers (NLC), and nanoemulsions (NE). Kai-Wei Wu, Corinne Sweeney, Narendar Dudhipala, Rama Gadepalli, John Rimoldi, Babu Tekwani, Soumyajit Majumdar. University of Mississippi, AAPS annual meeting and exposition. 2018 held at Walter E Washington convention center, Washington DC, USA.
5. Combination polymeric matrix films for sustained ocular delivery of Triamcinolone Acetonide – Development and physico-chemical evaluation. Akshaya Tatke¹, Karthik Yadav Janga¹, Bhavik Soneta¹, Soumyajit Majumdar. University of Mississippi, AAPS annual meeting and exposition. 2018 held at Walter E Washington convention center, Washington DC, USA.
6. Preparation, evaluation and in vitro characterization of a new 8-aminoquinoline derivative loaded nanostructured lipid carriers and nanoemulsion for relapsing malaria. Corinne Sweeney, Kai-Wei Wu, Narendar Dudhipala, Babu Tekwani, Soumyajit Majumdar. University of Mississippi, AAPS annual meeting and exposition. 2018 held at Walter E Washington convention center, Washington DC, USA.
7. Anti-fungal & Anti-bacterial PEGylated-NLCs for ocular applications: Characterization and In-vitro Efficacy Testing. Pranjal Taskar, Prit Lakhani, Akash Patil, Soumyajit Majumdar. University of Mississippi, AAPS annual meeting and exposition. 2018 held at Walter E Washington convention center, Washington DC, USA.

8. PEGylated Nano-lipid Carriers Improve Ocular Tissue Distribution of Natamycin. Akash Patil, Prit Lakhani, Pranjal Taskar, Kai-Wei Wu, Corinne Sweeney, Bharathi Avula, Yan-Hong Wang, Ikhlas Khan, Soumyajit Majumdar. University of Mississippi, AAPS annual meeting and exposition. 2018 held at Walter E Washington convention center, Washington DC, USA.
9. Carboxyvinyl Polymer Gels Containing Natamycin Loaded PEGylated Nanolipid Carriers for Ocular Applications: Formulation Optimization, and In vitro Evaluations. Akash Patil, Prit Lakhani, Pranjal Taskar, Soumyajit Majumdar. University of Mississippi, AAPS annual meeting and exposition. 2018 held at Walter E Washington convention center, Washington DC, USA.
10. KY Janga, A Tatke, S Shukla, B Avula, S Majumdar. University of Mississippi, AAPS annual meeting and exposition. 2017 held at San Diego. California. USA.
11. Improved Permeation of Paclitaxel Across the Blood Aqueous Barrier by Modulating the P-gp Expression with Specific Inhibitors. KY Janga, A Tatke, S Shukla, B Avula, S Majumdar. University of Mississippi, AAPS annual meeting and exposition. 2017 held at San Diego. California. USA.
12. Inhibition of MRP 1 Efflux Protein Expression at Blood Ocular Barriers with Specific Inhibitor for Improved Ocular Penetration of Fluorescein. KY Janga, A Tatke, S Shukla, S Majumdar. University of Mississippi, AAPS annual meeting and exposition. 2017 held at San Diego. California. USA.
13. Electrolyte Triggered In situ Hydrogels of Natamycin Bilosomes for Enhanced and Prolonged Ocular Pharmacotherapy. KY Janga, A Tatke, SP Balguri, MM Ibrahim, DN Maria, MM Jablonski, S Majumdar. University of Mississippi, AAPS annual meeting and exposition. 2017 held at San Diego. California. USA.
14. In situ Hydrogels of Natamycin Loaded Transfersomes for Improved Ocular Delivery. KY Janga, A Tatke, SP Balguri, MM Ibrahim, DN Maria, MM Jablonski, S Majumdar. University of Mississippi, AAPS annual meeting and exposition. 2017 held at San Diego. California. USA.
15. In Vivo Tear Kinetics and Ocular Distribution of Triamcinolone Acetonide from Topical Solid Lipid Nanoparticles and In Situ Gels. A Tatke, KY Janga, B Avula, M Jablonski, S Majumdar. University of Mississippi, AAPS annual meeting and exposition. 2017 held at San Diego. California. USA.
16. Improved Ocular Distribution of Loperamide via Inhibition of P-gp Efflux by the P-gp Inhibitors Transporter at Blood Ocular Barriers. A Tatke, KY Janga, B Avula, M Jablonski, S Majumdar. University of Mississippi, AAPS annual meeting and exposition. 2017 held at San Diego. California. USA.
17. Triamcinolone Acetonide Loaded Polymeric Matrix Films for Sustained Ocular Delivery. A Tatke, KY Janga, B Avula, S Majumdar. University of Mississippi, AAPS annual meeting and exposition. 2017 held at San Diego. California. USA.
18. Development and characterization of fluocinolone acetonide loaded nanosized lipid carriers for ocular delivery via sub-conjunctival route: synergistic effect of vitamin A palmitate. Bhavik Soneta, Akshaya Tatke, Karthik Yadav Janga, Surya P Lamichhane, Bharathi Avula, Soumyajit Majumdar. University of Mississippi, AAPS annual meeting and exposition. 2017 held at San Diego. California. USA.
19. Formulation Development, Optimization and In vitro-In vivo Characterization of Natamycin Loaded PEGylated Nano-Lipid Carriers for Ophthalmic Applications. Akash Patil, Prit

- Lakhani, Pranjali Taskar, Kai-Wei Wu, Corinne Sweeney, Bharathi Avula, Yan-Hong Wang, Ikhlas A. Khan, Soumyajit Majumdar. University of Mississippi, AAPS annual meeting and exposition. 2017 held at San Diego. California. USA.
20. Formulation, optimization and In vitro-In vivo characterization of amphotericin B loaded PEGylated lipid nanoparticles. Prit Lakhani, Akash Patil, Pranjali Taskar, Kai-Wei Wu, Corinne Sweeney, Bharathi Avula, Ikhlas A. Khan, Soumyajit Majumdar. University of Mississippi, AAPS annual meeting and exposition. 2017 held at San Diego. California. USA.
 21. Analogue Derivatization Of CBD For Improved Ocular Permeation: In Vitro And In Vivo Evaluation P. Taskar , G. R. Adelli , W. Gul , M. ElSohly , B. Murphy , S. Majumdar. University of Mississippi, AAPS annual meeting and exposition. 2017 held at San Diego. California. USA.
 22. Development Of Pilocarpine-NLCs Using A Design Of Experiment (DOE) Approach For Glaucoma Management In A Normotensive Rabbit Model. P. Taskar , G. R. Adelli , W. Gul2 , M. ElSohly , B. Murphy , S. Majumdar. University of Mississippi, AAPS annual meeting and exposition. 2017 held at San Diego. California. USA.
 23. Effect Of Surface Modification Of Triamcinolone Acetonide-NLCs With Chitosan And Chitosan Derivatives. Taskar, P. Lakhani, A. Patil, S. Majumdar. University of Mississippi, AAPS annual meeting and exposition. 2017 held at San Diego. California. USA.
 24. Optimization Of A Dual Drug-Loaded PEG-NLC System By A Design Of Experiment (DOE) Approach P. Taskar, P. Lakhani, A. Patil, S. Majumdar. University of Mississippi, AAPS annual meeting and exposition. 2017 held at San Diego. California. USA.
 25. Enhanced Delivery of Ciprofloxacin into the Ocular Tissues from Topical Nanostructured Lipid Carriers: Effect of Surface Functionalization S. P. Balguri , G. Adelli , S. Majumdar. University of Mississippi, 2 Insys Therapeutics, Inc. AAPS Annual Meeting 2016, Denver, Colorado.
 26. Ocular Delivery of Resveratrol for the Treatment of Diabetic Retinopathy: Formulation Preparation and Characterization. Balguri, Sai Prachetan, Majumdar, Soumyajit. AAPS Annual Meeting 2016, Denver, Colorado.
 27. Double Extrusion as a Novel Approach for Product Development. Pimparade, Manjeet, Park, J., Vo, Anh, Feng, Xin, Majumdar, S., Lian, Zhuoyang, Bi, Vivian, Durig, Thomas, Repka, Michael. AAPS Annual Meeting 2016, Denver, Colorado.
 28. Enhancement in the Transcorneal Permeation of Fluorescein via Bilosomes: Formulation and In Vitro Evaluation. Janga, Karthik, Tatke, Akshaya, Ashour, Eman, Majumdar, Soumyajit. AAPS Annual Meeting 2016, Denver, Colorado.
 29. Distribution of Fluorescein in Aqueous Humor and Vitreous Humor from the Systemic Circulation following Intravenous Administration in Sprague Dawley Rats. Janga, Karthik, Tatke, Akshaya, Ashour, Eman, Majumdar, Soumyajit. AAPS Annual Meeting 2016, Denver, Colorado.
 30. Optimization and Characterization of Curcumin Loaded Nanostructured Lipid Carriers for Ocular Drug Delivery. Lakhani, Prit, Ashour, Eman, Majumdar, Soumyajit. AAPS Annual Meeting 2016, Denver, Colorado.
 31. Ocular Distribution of Loperamide HCl in Wild Type and MDR 1A Knock Out Sprague Dawley Rats: Impact of P-Glycoprotein. Tatke, Akshaya, Janga, Karthik, Ashour, Eman,

- Jablonski, Monica, Avula, Bharathi, Majumdar, Soumyajit. AAPS Annual Meeting 2016, Denver, Colorado.
32. Effect of a Single vs Multiple Day Regimen of Δ^9 -THC-Valine-Hemisuccinate on the Intraocular Pressure Lowering Activity in Normotensive Rabbits. Taskar, Pranjali, Ashour, Eman, Lakhani, Prit, Gul, Waseem, ElSohly, Mahmoud, Majumdar, Soumyajit. AAPS Annual Meeting 2016, Denver, Colorado.
 33. Formulation development and characterization of Amphotericin B loaded lipid nanoparticles. Lakhani, Prit, Ashour, Eman, Majumdar, Soumyajit. AAPS Annual Meeting 2016, Denver, Colorado.
 34. Ocular Distribution of Diclofenac Sodium from Sustained Release Ion Exchange Resin Loaded Matrix Films G. R. Adelli, S. Balguri, S. Majumdar. AAPS 2015 Annual Meeting. Orlando, Florida.
 35. Surface Functionalized Lipid Nanocarriers and Matrix Films Containing Ciprofloxacin for the Treatment of Corneal Keratitis S. Balguri, G. R. Adelli, P. Bhagav, M. A. Repka, S. Majumdar. AAPS 2015 Annual Meeting. Orlando, Florida.
 36. Non-invasive Cationic Colloidal Nanocarriers for Ocular Delivery of Natamycin: Preparation and In Vitro Evaluation S. Balguri, G. R. Adelli, P. Bhagav, M. A. Repka, S. Majumdar. AAPS 2015 Annual Meeting. Orlando, Florida.
 37. Evaluating the Oral Bioavailability of Dihydroartemisinin Dimer Oxime from Various Formulations N. Punyamurthula, G. Adelli, P. Bhagav, W. Gul, M. ElSohly, M. Repka, S. Majumdar. AAPS 2015 Annual Meeting. Orlando, Florida.
 38. Development and Evaluation of Triamcinolone Acetonide Loaded Solid Lipid Nanoparticles for Topical Ocular Delivery A. Tatke, G. R. Adelli, P. Bhagav, S. Majumdar. AAPS 2015 Annual Meeting. Orlando, Florida.
 39. Preparation and Characterization of Triamcinolone Acetonide Loaded Chitosan Nanoparticles for Ocular Delivery P. S. Taskar, G. R. Adelli, S. Prachetan, P. Bhagav, S. Majumdar. AAPS 2015 Annual Meeting. Orlando, Florida.
 40. Beneficial Effects of the Combination of Pressurized Carbon Dioxide and Hot Melt Extrusion on Drug Loading and Release Properties E. A. Ashour, S. Majumdar, B. Beissner, Z. Lian, S. Porter, V. Bi, T. Durig, M. A. Repka. AAPS 2015 Annual Meeting. Orlando, Florida.
 41. Hot-Melt Extrusion as an Approach to Improve Permeability and Oral Absorption of the Psychoactive Natural Product Piperine E. A. Ashour, S. Alshehri, S. Majumdar, A. Gryczke, K. Kolter, N. Langley, M. A. Repka. AAPS 2015 Annual Meeting. Orlando, Florida.
 42. Investigation of the Effects of Cyclodextrin on the Behavior of Amorphous Solid Dispersions Utilizing Hot-Melt Extrusion Techniques M. B. Pimparade, A. Vo, S. Majumdar, B. Beissner, Z. Lian, S. Porter, V. Bi, T. Durig, M. A. Repka. AAPS 2015 Annual Meeting. Orlando, Florida.
 43. Development of Fixed Dose Combinations Utilizing Hot-Melt Extrusion Technology M. B. Pimparade, J-B. Park, A. Vo, S. Majumdar, Z. Lian, V. Bi, T. Durig, M. A. Repka. AAPS 2015 Annual Meeting. Orlando, Florida.
 44. Investigation of the Combined Effect of MgO and PEG on the Release Profiles of Mefenamic Acid Utilizing Hot-Melt Extrusion Techniques S. M. Alshehri, B. B. Alsulays, E. A. Ashour, B.

K. Almutairy, R. V. Tiwari, J-B. Park, B. H. Sandhu, A. Gryczke, K. Kolter, N. Langley, S. Majumdar, M. A. Repka. AAPS 2015 Annual Meeting. Orlando, Florida.

45. Formulation and Evaluation of Mefenamic Acid Sustained Release Tablets Containing Kollidon® SR via Hot-Melt Extrusion Technology S. M. Alshehri, B. B. Alsulays , E. A. Ashour, B. K. Almutairy, R. V. Tiwari, A. Gryczke, K. Kolter, N. Langley, S. Majumdar, M. A. Repka. AAPS 2015 Annual Meeting. Orlando, Florida.
46. Development of hesperetin loaded solid lipid nanoparticles for topical delivery. G. R. Adelli, M. A. Repka, S. Majumdar. AAPS 2014. San Diego, USA. November 2014.
47. Ocular disposition of hesperetin from topically administered matrix film and solid lipid nanoparticles in anesthetized and conscious animal models. G. R. Adelli, S. P. Balguri, M. A. Repka, S. Majumdar. AAPS 2014. San Diego, USA. November 2014.
48. Effect of physicochemical characteristics and formulation on the intraocular distribution of small molecules from topical formulations. G. R. Adelli, P. Bhagav, M. A. Repka, S. Majumdar.
49. Development and evaluation of curcumin loaded matrix film and solid lipid nanoparticles for topical delivery. G. R. Adelli, S. P. Balguri, M. A. Repka, S. Majumdar. AAPS 2014. San Diego, USA. November 2014.
50. In vivo evaluation of topical, melt cast, matrix films containing indomethacin for back-of-the eye delivery. S. P. Balguri, G. R. Adelli, P. Bhagav, M. A. Repka, S. Majumdar. AAPS 2014. San Diego, USA. November 2014.
51. Development of a topical prednisolone sodium phosphate polymeric matrix film for delivery to the posterior segment of the eye. S. P. Balguri, G. R. Adelli, P. Bhagav, M. A. Repka, S. Majumdar. AAPS 2014. San Diego, USA. November 2014.
52. Development and characterization of indomethacin loaded solid lipid nanoparticles for ocular delivery. S. P. Balguri, G. R. Adelli, P. Bhagav, M. A. Repka, S. Majumdar. AAPS 2014. San Diego, USA. November 2014.
53. Indomethacin loaded chitosan nanoparticles for ocular delivery: Development, physicochemical characterization and in vitro evaluation. S. P. Balguri, G. R. Adelli, P. Bhagav, M. A. Repka, S. Majumdar. AAPS 2014. San Diego, USA. November 2014.
54. In vitro characterization and evaluation of indomethacin loaded nanostructured lipid carriers for ocular delivery. S. P. Balguri, G. R. Adelli, P. Bhagav, M. A. Repka, S. Majumdar. AAPS 2014. San Diego, USA. November 2014.
55. Development and in vitro evaluation of ocular inserts containing ciprofloxacin hydrochloride S. P. Balguri, G. R. Adelli, P. Bhagav, M. A. Repka, S. Majumdar. AAPS 2014. San Diego, USA. November 2014.
56. Development of Δ^9 -Tetrahydrocannabinol prodrug with improved IOP lowering efficacy. P. Bhagav, G. R. Adelli, W. Gul, M. ElSohly, M. A. Repka, S. Majumdar. AAPS 2014. San Diego, USA. November 2014.
57. Intraocular pressure lowering activity of Δ^9 -Tetrahydrocannabinol in an α -chymotrypsin induced glaucoma model: Dose-effect relationship. P. Bhagav, G. R. Adelli, W. Gul, M. ElSohly, M. A. Repka, S. Majumdar. AAPS 2014. San Diego, USA. November 2014.

58. In vivo ocular disposition of $\delta 8$ -tetrahydrocannabinol solid lipid nanoparticles. N.S. Punyamurthula, W.Gul, M. ElSohly, M.A.Repka, S. Majumdar. AAPS 2014. San Diego, USA. November 2014.
59. Development of lipid based formulations for improving the oral bioavailability of novel artemisinin dimer oxime. N.S. Punyamurthula, W.Gul, M. ElSohly, M.A.Repka, S. Majumdar. AAPS 2014. San Diego, USA. November 2014.
60. Physicochemical characterization of a novel artemisinin dimer analog: the dimer oxime. N.S. Punyamurthula, W.Gul, M. ElSohly, M.A.Repka, S. Majumdar. AAPS 2014. San Diego, USA. November 2014.
61. Investigation of the Taste Masking Behavior of Hot Melt Extruded Caffeine Citrate by e-tongue and Human Taste Panel Studies. M. B. Pimparade, J. T. Morott, J-B. Park, V. Kulkarni, S. Majumdar, S. N. Murthy, B. Beissner, Z. Lian, S. Porter, V. Bi, T. Durig, N. M. Reena, K. Vanaja, C. Kumar P, M. A. Repka. *The AAPS Journal Suppl., San Diego, CA (2014)*
62. Solubility enhancement of poorly water soluble drugs with Kolliphor[®] P 407 using melt extrusion techniques. A. S. Alshetaili, B. K. Almutairy, E. A. Ashour, S. M. Alshehri, W. Lu, J. B. Park, S. Majumdar, A. Gryczke, K. Kolter, N. Langley, S. Mishra, M. A. Repka. *The AAPS Journal Suppl., San Diego, CA (2014)*
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161. Formulation and Characterization of Indomethacin Loaded Lipid Particles. K. Hippalgaonkar, K. Hippalgaonkar, S. Majumdar. *AAPS Annual Meeting, 2009*.
162. Physicochemical Characteristics and *In Vitro* Ocular Tissue Permeability of Hesperidin: a Natural Bioflavonoid. R. Srirangam, S. Majumdar. *AAPS Annual Meeting, 2008*.
163. Transcorneal Permeation of L- and D- Aspartate Acyclovir Prodrugs: Delineation of Passive Diffusion versus Transporter Involvement. T. Hingorani, R. Srirangam, S. Majumdar. *AAPS Annual Meeting, 2008*.
164. Effect of Surfactants and Cyclodextrins on Aqueous Solubility and Stability of Delta- 8-Tetrahydrocannabinol. S. Majumdar, K. Hippalgaonkar, R. Jain, W. Gul, M. A. ElSohly, M. A. Repka. *AAPS Annual Meeting, 2008*.
165. Preparation and characterization of an inclusion complex of a hemisuccinate ester prodrug of delta-9-tetrahydrocannabinol with modified beta-cyclodextrins. S. B. Upadhye, S. Majumdar, S. J. Kulkarni, M. A. Avery, W. Gul, M. A. ElSohly, M. A. Repka. *AAPS Annual Meeting, 2008*.

166. The influence of inclusion complex formation with random methylated beta cyclodextrin (RAMEB) on thermal stability and permeation characteristics of the hemisuccinate ester prodrug of delta-9-tetrahydrocannabinol. S. B. Upadhye, S. Majumdar, W. Gul, M. A. ElSohly², M. A. Repka. *AAPS Annual Meeting, 2008.*
167. Preformulation characterization of a prodrug of delta-9-tetrahydrocannabinol (THC-XIX645) S. B. Upadhye, S. Majumdar, T. Jefferson, W. Gul, M. A. ElSohly, M. A. Repka. *AAPS Annual Meeting, 2008.*
168. Effect of pH and 2-hydroxypropyl- β -cyclodextrin on solubility of Δ^9 - Tetrahydrocannabinol and two novel pro-drugs, ELI-UN1-88-4 and ELI-UN1-89-2 Sunil Kumar Battu, Ziyaur Rahman, Soumyajit Majumdar, Waseem Gul, Mahmoud A. ElSohly, Michael A. Repka. *AAPS Annual Meeting, 2008.*
169. Evaluation of Physicochemical Properties of Berberine Chloride. S. Battu, S. Majumdar, M. A. Repka. *AAPS Annual Meeting, 2008.*
170. Physicochemical Characterization of a Novel Delta-9 Tetrahydrocannabinol Prodrug, ELI-UN1-88-4. Z. Rahman, S. Battu, S. Majumdar, W. Gul, M. A. ElSohly, M. A. Repka. *AAPS Annual Meeting, 2008.*
171. Chemical, Enzymatic and Thermal Stability of a Novel Delta-9 Tetrahydrocannabinol Prodrug, ELI-UN1-88-4. Z. Rahman, S. Battu, S. Majumdar, W. Gul, M. A. ElSohly, M. A. Repka. *AAPS Annual Meeting, 2008.*
172. Evaluation of transbuccal delivery of tetrahydrocannabinol using hot-melt extruded transmucosal patch systems. Soumyajit Majumdar, Sampada Upadhye, Sridhar Thumma, Sunil Battu, Waseem Gul, Mahmoud ElSohly and Michael A, Repka. *AAPS Annual Meeting, 2007.*
173. Effect of random methylated beta cyclodextrin on aqueous solubility, stability and permeation of the hemisuccinate ester of Delta-9-tetrahydrocannabinol. Sampada Upadhye, Soumyajit Majumdar, Michael A, Repka. *AAPS Annual Meeting, 2007.*
174. Effect of processing conditions and formulation additives on chemical stability of a Delta-9-tetrahydrocannabinol prodrug in polymeric matrices produced by a hot-melt method. Sunil Battu¹, Sai Boddu, Soumyajit Majumdar, Michael A. Repka. *AAPS Annual Meeting, 2007.*
175. Effect of topical instillation of chitosan on intraocular pressure and corneal permeability in the rabbit model. Soumyajit Majumdar, Ketan Hippalgaonkar, Ramesh Srirangam, Michael A. Repka. *AAPS Annual Meeting, 2007.*
176. Effect of topically administered erythromycin on the vitreal kinetics of intravitreally administered quinidine in rabbits. Ketan Hippalgaonkar and Soumyajit Majumdar. *AAPS Annual Meeting, 2007.*
177. Hot-Melt Processed Poly (Ethylene Oxide) Matrices Incorporated with PspA Elicits Protective Immunity against Streptococcus pneumoniae. M.A. Repka, S. Majumdar, S. Thumma, Q. Moore, L. Johnson and L. McDaniel. *AAPS Annual Meeting, 2007.*
178. Physicochemical properties of delta-8 tetrahydrocannabinol. Soumyajit Majumdar¹, Ketan Hippalgaonkar, Ramesh Srirangam, Waseem Gul, Mahmoud Elsohly and Michael A. Repka. *AAPS Annual Meeting, 2007.*
179. Chemical Stability of a Pro-Drug of Δ^9 -Tetrahydrocannabinol: Effect of Processing Variables and Plasticizers S. Thumma, S. Majumdar, M. ElSohly, M. Repka. *AAPS Annual Meeting, 2007.*

180. Effect of Ophthalmic Formulation Components on Permeation of Acyclovir across Excised Rabbit Cornea. Ketan Hippalgaonkar and Soumyajit Majumdar. *AAPS Annual Meeting, 2006*
181. Formulation and Evaluation of Rapidly Disintegrating Fenoverine Tablets. Sunil Kumar Battu, Madhusudan Rao Yamsani, Soumyajit Majumdar, Michael Repka. *AAPS Annual Meeting, 2006.*
182. Factors Affecting Oxidation of Δ^9 -Tetrahydrocannabinol in Hot-Melt Polymeric Films. Manish Munjal, Mahmoud A. ElSohly, Michael A. Repka, Soumyajit Majumdar. *AAPS Annual Meeting, 2006.*
183. Peptide Transporter Targeted Drug Delivery: Evaluation of Di-peptide Monoester Prodrugs of Ganciclovir. Soumyajit Majumdar, Dhananjay Pal and Ashim K. Mitra. *AAPS Annual Meeting 2004.*
184. Permeation Mechanism of Acyclovir and Idoxuridine Across Rabbit Corneal Epithelium. Soumyajit Majumdar and Ashim K. Mitra. *AAPS Annual Meeting 2003.*
185. Evaluation of Arpe-19 as an In Vitro Screening Tool for Monocarboxylate Transporter Targeted Drug Delivery to the RPE. Soumyajit Majumdar, Gunda Sriram, and Ashim K. Mitra. *AAPS Annual Meeting 2003.*
186. Use of Peptide Transporters for Drug Delivery to the Posterior Segment of Eye. Soumyajit Majumdar, Kunal J. Patel, and Ashim K. Mitra. *AAPS Annual Meeting 2003.*
187. Mechanism of Permeation of Nucleoside Analogs across the Human Retinal Pigmented Epithelial Cell Line, ARPE-19. Soumyajit Majumdar, Ashim K. Mitra. *AAPS Annual Meeting 2002.*

ARVO (Association for Research in Vision and Ophthalmology)

1. Development and evaluation of prolonged release topical indomethacin formulations for ocular inflammation. G.R. Adelli, N. Punyamurthula, P. Bhagav, S. Balguri, S. Majumdar. ARVO, 2014.
2. Vitreal Pharmacokinetics of Hesperidin Following Intravitreal Administration. Soumyajit Majumdar and Ramesh Srirangam. ARVO, 2009.
3. Dipeptide Monoester Ganciclovir Prodrugs for Treating HSV-1-Induced Corneal Epithelial and Stromal Keratitis: In vitro and In vivo Evaluations. Ritesh Jain, Soumyajit Majumdar and Ashim K. Mitra. ARVO, 2006.
4. Antiviral Efficacy of Dipeptide Ganciclovir and Acyclovir Prodrugs, Val-Val-Ganciclovir (VVGCV) and Gly -Val-Acyclovir (GVACV), Against HSV-1 Corneal Epithelial Keratitis in the Rabbit. M.Itahashi, S.G. Trahan, B.S. Anand, H.W. Thompson, S.Majumdar, Y.E. Nashed, A.K. Mitra, J.M. Hill. ARVO, 2004.
5. In Vitro Activity And Transport Of Dipeptide Monoester Prodrugs Of Ganciclovir Across Isolated Rabbit Cornea. Ritesh Jain, Soumyajit Majumdar, Yasser Nasheed and Ashim K. Mitra. ARVO, 2004.
6. Identification and Characterization of a Monocarboxylic Acid Transport System on the Human Retinal Pigment Epithelium Cell Line – ARPE-19, Soumyajit Majumdar, Sriram Gunda, Dhananjay Pal, Ashim K. Mitra. ARVO, 2003.
7. Nucleoside Transport Mechanisms in the Rabbit Corneal Epithelial Cell Line (SIRC)

8. and the Isolated Rabbit cornea: Role in Antiviral Nucleoside Transport. ARVO, 2002.
9. Mechanism of Ganciclovir Transport Across a Rabbit corneal Epithelial Cell Line (SIRC) and Intact Rabbit Cornea. Giridhar S. Tirucherai, Soumyajit Majumdar, Ashim K. Mitra ARVO, 2002.
10. Nucleoside Transport Mechanisms in the Rabbit Corneal Epithelial Cell Line (SIRC) and the Isolated Rabbit Cornea: Role in Antiviral Nucleoside Transport. Soumyajit. Majumdar, Ashim K. Mitra. ARVO, 2000.

OTHERS

1. Development and Evaluation of Topical Tetrahydrocannabinol Formulations for Glaucoma Therapy. G.R. Adelli, N. Punyamurthula, P. Bhagav, S. Balguri, S. Pettaway, W. Gul, M.A. ElSohly, M.A. Repka, S. Majumdar. NIH, NIGMS Fifth Biennial National IDEa Symposium of Biomedical Research Excellence (NISBRE). Washington, DC. June 2014.
2. Design of an immediate-release solid dosage form for a poorly water-soluble drug using Klucel EF via hot melt extrusion. M Repka, N Mohammed, W Deng, A Singh, S Majumdar, E Pinto, T Durig. *Controlled Release Society Annual Meeting*, Portland, USA, July, 2010.
3. Solubility Enhancement of Fenofibrate by Klucel ELF Matrices Produced by Melt Extrusion. M Repka, W Deng, A Singh, S Jo, S Majumdar, E Pinto, T Durig. *Controlled Release Society Annual Meeting*, Portland, USA, July, 2010.
4. Preformulation studies of a novel delta-9 tetrahydrocannabinol prodrug. S. Battu, Z. Rahman, S. Majumdar, W. Gul, M.A. ElSohly, M.A. Repka, *2nd Biennial National IDEa Symposium of Biomedical Research Excellence* (NISBRE), Washington, DC, August 2008.
5. Evaluation of buccal delivery of tetrahydrocannabinol pro-drugs utilizing hot-melt processed oral transmucosal patch systems. S. Majumdar, S. Upadhye, S. Thumma, S. Battu, W. Gul, M.A. ElSohly, Z. Rahman, M.A. Repka. *6th World Meeting on Pharmaceutics, Biopharmaceutics and Pharmaceutical Technology*, Barcelona, Spain, April 2008.
6. Transmucosal delivery of δ^9 -tetrahydrocannabinol from a prodrug formulation. Mahmoud A. Elsohly, Waseem Gul, Soumyajit Majumdar and Michael A. Repka. 1st Annual Satellite Symposium on the Cannabinoids. Therapeutic potential of the cannabinoids: present and future. Limassol, Cyprus, may, 2008
7. Evaluation of non-ionic surfactants for transmucosal delivery of a pro-drug of Δ^9 -tetrahydrocannabinol. S. Thumma, A. Singh, S. Majumdar, M.A. ElSohly, W. Gul, M.A. Repka. *SRDG-PharmForum*, Little Rock, AR, May 2008.
8. Evaluation of non-ionic surfactants for transmucosal delivery of a pro-drug of Δ^9 -tetrahydrocannabinol. S. Thumma, A. Singh, S. Majumdar, M.A. ElSohly, W. Gul, M.A. Repka. *Sigma-Xi Poster Symposium*, University, MS, April 2008.
9. Preformulation Evaluation of THC Prodrugs. S. Upadhye, S. Majumdar, W. Gul, M.A.

ElSohly, M.A. Repka. *Sigma-Xi Poster Symposium*, University, MS, April 2008.

10. Improving solubility and stability of hemisuccinate ester prodrug of delta-9-tetrahydrocannabinol with cyclodextrin complexation. S. Upadhye, S. Majumdar, S. Kulkarni, M.A. Avery, W. Gul, M.A. ElSohly, M.A. Repka. *Annual Neuroscience and Behavior Research Day*, Jackson, MS, December 2008.
11. Evaluation of a novel delta-9 tetrahydrocannabinol prodrug, ELI-UN1-88-4. S. Battu, Z. Rahman, S. Majumdar, W. Gul, M.A. ElSohly, M.A. Repka. *Annual Neuroscience and Behavior Research Day*, The University of Mississippi School of Medicine, Jackson, MS, December 2008.

Graduate Student Awards

Ketan Hippalgaonkar

- Inductee, **Phi Kappa Phi** - National Academic Honor Society – 2007
- Inductee, **Rho Chi** - Scholastic Pharmacy Honor Society – 2008
- **Best poster presentation award** in Chemical Sciences Section-III, Sigma Xi Student Research Poster Symposium, held at The University of Mississippi, MS, USA. April 16th 2008
- **Natural Product Neuroscience Fellow (NPNF) award-2008**, Center of Research Excellence in Natural Products Neuroscience (CORE-NPN), The University of Mississippi.
- Recipient of **Graduates School Honor Fellowship**, University of Mississippi. August 2006- 2010.
- Summer Internship at DMPK-Clinical PK/PD division of Novartis Pharmaceutical Corporation, East Hanover, NJ.

• **Ramesh Srirangam**

- Inductee, **Phi Kappa Phi** - National Academic Honor Society – 2007
- Inductee, **Rho Chi** - Scholastic Pharmacy Honor Society – 2008
- Natural Products Neuroscience (CORE-NPN) Fellowship funded by the National Institutes of Health for 2009-2010.
- Best poster award in the Health Sciences – I category for his poster entitled “ocular delivery of hesperidin – a promising candidate for diabetic retinopathy” at the University of Mississippi, Sigma-Xi Poster Symposium, Apr. 2008.
- Natural Products Neuroscience (CORE-NPN) Fellowship funded by the National Institute of Health for 2007-2008.
- Summer Internship at DMPK-Clinical PK/PD division of Novartis Pharmaceutical Corporation, East Hanover, NJ.

- **Mr. Tushar Hingorani.**
 - Inductee, Phi Kappa Phi - National Academic Honor Society – 2008.
 - Inductee, Rho Chi - Scholastic Pharmacy Honor Society – 2009.
 - Natural Product Neuroscience Fellow (NPNF) Award-2009, Center of Research Excellence in Natural Products Neuroscience (CORE-NPN), The University of Mississippi.
 - Travel award from the Lipid Based Drug Delivery Focus Group (LBDDFG) sponsored by Gattefossé, to attend the 2009 AAPS Annual Meeting and Exposition in Los Angeles, California, November 8-12.
- **Ms. Kanchan Hippalgaonkar.**
 - Travel award from the Lipid Based Drug Delivery Focus Group (LBDDFG) sponsored by Gattefossé, to attend the 2010 FIP PSWC/AAPS Annual Meeting and Exposition in New Orleans, Louisiana, November 14-18.
- **Mr. Goutham Adelli**
 - Mr. Goutham Adelli received the Natural Products Neuroscience (CORE-NPN) Fellowship funded by the National Institutes of Health.
 - Mr. Goutham Adelli was the 2nd place recipient for the 2013 AAPS Ocular Drug Delivery and Disposition Focus Group Graduate Student Poster Award. This award is presented to graduate students presenting outstanding work making significant contribution to the Ocular Drug Delivery and Disposition field.
- **Mr. Nagendra Punyamurthula**
 - Received a travel award from the Lipid Based Drug Delivery Focus Group (LBDDFG) sponsored by Gattefossé, to attend the 2011 FIP PSWC/AAPS Annual Meeting and Exposition in Washington, D.C.

Dissertations and theses directed to completion

Ketan Hippalgaonkar, B. Pharm., Ph.D.

Dissertation Title: “Biopharmaceutical approaches for improved drug delivery across ocular barriers”

Department: Pharmaceutics

Major Advisor: **Soumyajit Majumdar**, Ph.D.

Ramesh Srirangam, M. Pharm., Ph.D.

Dissertation Title: “Ocular delivery and pharmacokinetics of hesperidin and its aglycone, hesperetin”

Department: Pharmaceutics

Major Advisor: **Soumyajit Majumdar**, Ph.D.

Kanchan Hippalgaonkar, B.Pharm., M.S.
Masters Dissertation Title: "A Novel Double Layered Hot Melt Extruded Film For Ocular Drug Delivery"
Major Advisor: **Soumyajit Majumdar, Ph.D.**

Tushar Hingorani, B. Pharm., Ph.D.
Title: Preformulation Characterization and Formulation Development of Δ^9 -Tetrahydrocannabinol Prodrugs for Potential Treatment of Glaucoma.
Department: Pharmaceutics
Major Advisor: **Soumyajit Majumdar Ph.D.**

Nagendra Punyamurthulla, B. Pharm., Ph.D.
Lipid based systems for enhancing the handling and bioavailability of poorly soluble drugs
Department: Pharmaceutics
Major Advisor: **Soumyajit Majumdar Ph.D.**

Goutham Adelli B. Pharm., Ph.D.
Lipid based systems for enhancing the handling and bioavailability of poorly soluble drugs
Department: Pharmaceutics
Major Advisor: **Soumyajit Majumdar Ph.D.**

Sai Balguri, B. Pharm., Ph.D.
Lipid based frameworks and topical ocular inserts for the delivery of small molecule therapeutics to the posterior segment of the eye.
Department: Pharmaceutics
Major Advisor: **Soumyajit Majumdar Ph.D.**

Prit Lakhani, B.Pharm., M.Pharm., Ph.D.
Pegylated Nanostructured Lipid Carriers for Amphotericin B Ocular Delivery
Department: Pharmaceutics
Major Advisor: **Soumyajit Majumdar Ph.D.**

Pranjal taskar
Formulation development, preclinical testing, and primary packaging optimization for cannabinoids and other therapeutics
Department: Pharmaceutics
Major Advisor: **Soumyajit Majumdar Ph.D.**

Karthik Yadav Janga
Formulation strategies to address physiological and anatomical constraints for improved topical ocular drug delivery.
Department: Pharmaceutics
Major Advisor: **Soumyajit Majumdar Ph.D.**

Member of Dissertation Committees

Sivaram Kiran Vaka, M. Pharm., Ph.D.

Dissertation Title: “Nose to brain delivery of therapeutic agents”

Department: Pharmaceutics

Major Advisor: S.N. Murthy, Ph.D.

Sridhar Thumma, B. Pharm., Ph.D.

Dissertation Title: “Characterization of water insoluble and water soluble drugs in hot-melt poly(ethylene oxide) matrices for oral transmucosal delivery”

Department: Pharmaceutics

Major Advisor: Michael A Repka, Ph.D.

Sunil Battu, B. Pharm., M.S., Ph.D.

Theses Title: “Pre-formulation and formulation considerations for transmucosal and oral delivery of compounds of natural origin produced utilizing hot-melt extrusion technology.

Department: Pharmaceutics

Major Advisor: Michael A Repka, Ph.D.

Deepthi Pabbisetty, B. Pharm., Ph. D.

Dissertation Title: “Pharmacokinetically guided lead optimization of antimalarial compounds”

Department: Pharmaceutics

Major Advisor: Bonnie Avery, Ph.D.

Sampada Upadhye, M. Pharm., Ph. D. Candidate

Dissertation Title: “Preparation and characterization of lyophilized cyclodextrin complexes of a hemisuccinate ester of delta-9-tetrahydrocannabinol for transmucosal delivery”

Department: Pharmaceutics

Major Advisor: Michael A Repka, Ph.D.

Sai Boddu, M. Pharm., Ph.D.

Dissertation Title: “Pharmacokinetics of Mitragynine after administration of different extracts of Mitragyne speciosa in rats and metabolism studies of Mitragynine including the identification of metabolites in Sprague Dawley Rats”

Department: Pharmaceutics

Major Advisor: Bonnie Avery, Ph.D.

Harsha Vinnakota, B. Pharm., Ph.D.

Dissertation Title: “Pharmacokinetic evaluation of a novel drug, SN79, a putative sigma-2 receptor antagonist”

Department: Pharmaceutics

Major Advisor: Bonnie Avery, Ph.D.

Srinivasa Murthy Sammeta, M. Pharm., Ph.D.

Dissertation Title: “Biophysical Techniques of Transcutaneous Drug Sampling and Drug Delivery”

Department: Pharmaceutics
Major Advisor: S.N. Murthy, Ph.D.

Vivek Kumar Garripelli
Title: Development of Novel Thermosensitive Polymers for Bioresponsive Drug Delivery.
Department: Pharmaceutics
Major Advisor: Seongbong Jo

Weibin Deng
Title: Development and Characterization of Polymeric Drug Delivery Systems Prepared by Hot Melt Extrusion: Solubility, Bioadhesion and Mechanical Studies.
Department: Pharmaceutics
Major Advisor: Michael A. Repka

Abhilasha Singh
Title: Design and Development of Drug Delivery Systems for Sustained and Immediate Release utilizing Hot Melt Extrusion Techniques.
Department: Pharmaceutics
Major Advisor: Michael A. Repka

Mohammed Noorullah Naqvi
Prospectus Title: Pharmaceutical Formulation Development Utilizing Hot Melt Extrusion And Other Techniques For Development Of Immediate And Controlled Release Dosage Forms
Department: Pharmaceutics
Major Advisor: Michael A. Repka Ph.D.

Pradeep Kumar Vuppala
Title: Metabolism and Pharmacokinetics in the Development of New Therapeutics for Cocaine and Opioid Abuse
Department: Pharmaceutics
Major Advisor: Bonnie Avery, Ph.D.

Seshulata Jamalapuram
Title: Metabolic Stability and Pharmacokinetics in Lead optimization of Novel Sigma Receptor Ligands
Department: Pharmaceutics
Major Advisor: Bonnie Avery, Ph.D.

Sindhuri Maddineni
Title: Characterization of different hydrophilic polymeric extrudates and their applicability in hot melt extrusion technology
Department: Pharmaceutics
Major Advisor: Michael A. Repka Ph.D.

Ketaki Patwardhan

Title: Solubility Enhancement via Melt Extrusion. Drug-Polymer Solubility, Physicochemical Characterization and Quality by Design.

Department: Pharmaceutics

Major Advisor: Michael A. Repka Ph.D.

Jiannan Lu

Title: Solubility Enhancement And Precipitation Inhibition Of Poorly Water Soluble Compounds Utilizing Hot Melt Extrusion Technology

Department: Pharmaceutics

Major Advisor: Michael A. Repka Ph.D.

Saad Alshshrani

Dissertation Title: Influence of Hot Melt Extrusion Processing Parameters on the Properties of A Pharmaceutical Formulation.

Department: Pharmaceutics

Major Advisor: Michael A. Repka Ph.D.

Abdullah Alshetaili

Dissertation Title: Solubility Enhancement, Mechanical Properties and Taste Masking of Poorly Water Soluble Compounds by Optimizing Hot Melt Extrusion Processing

Department: Pharmaceutics

Major Advisor: Michael A. Repka Ph.D.

Sultan Alshehri

Dissertation Title: Versatility of hot-melt extrusion for dosage form design

Department: Pharmaceutics

Major Advisor: Michael A. Repka Ph.D

Eman Ashour

Dissertation Title: Influence of novel techniques on solubility, mechanical properties and permeability via hot melt extrusion technology

Department: Pharmaceutics

Major Advisor: Michael A. Repka Ph.D

Hemlata Patil

Dissertation Title: Hot-Melt Extrusion: A Versatile Pharmaceutical Technology

Department: Pharmaceutics

Major Advisor: Michael A. Repka Ph.D

Xin Feng

Dissertation Title: Hot-Melt Extrusion: Evaluation And Enhancement Of Physical Stability Of Amorphous Solid Dispersions

Department: Pharmaceutics

Major Advisor: Michael A. Repka Ph.D

Manjeet Pimparade

Dissertation title: patient friendly formulations using hot-melt extrusion technology.
Department: Pharmaceutics
Major Advisor: Michael A. Repka Ph.D

Hyung Kyung Lee
Masters Dissertation Title: Synthesis And Characterization Of pH/Temperature Dual Sensitive Multiblock Copolymer For Drug Delivery
Department: Pharmaceutics
Major Advisor: Seongbong Jo

Ajinkya Bhagurkar
Ph.D. Dissertation Title: Biomechanical Optimization of pH-Sensitive Hydrogel for Chronic Wound Healing
Department: Pharmaceutics
Major Advisor: Michael Repka

Xingyou Ye
Ph.D. Dissertation Title: Novel application of twin screw extruder on production of diverse formulations
Department: Pharmaceutics
Major Advisor: Michael Repka

Haley McFall
M.S. Dissertation Title Formulation of aripiprazole-loaded ph-modulated solid dispersions via hot-melt extrusion technology: in vitro and in vivo studies
Department: Pharmaceutics
Major Advisor: Michael Repka

Priyanka Thipse
Ph.D. Dissertation title: application of quality by design and process analytical technology towards hot-melt extrusion processes department: pharmaceutics
Major Advisor: Michael Repka

Nicole Mendosa
Novel applications of hot-melt extrusion technology in trans-buccal and topical drug delivery systems
Major Advisor: Michael Repka

Venkata Raman Kallakunta
A novel dimension of twin-screw technology for controlled release and solubility enhancement: study on effect of formulation and process parameters.
Major Advisor: Michael Repka

Current Graduate Students

Akshaya Tatke – Ph.D. Student
Akash Patil – Ph.D. Student
Kai-Wei Wu – Ph.D. Student
Corinne Sweeney – Ph.D. Student
Tabish Mehraj – Ph.D. Student
Sushrut Marathe – Ph.D. Student
Ruchi Sharma – Ph.D. Student
Samir Senapati – M.S. Student
Poorva Joshi – M.S. Student
Kanika Goel – M.S. Student

Current Postdoctoral Research Associates

Narender Doodhipala, Ph.D.

Past Postdoctoral Research Associates

Prakash Bhagav, Ph.D.
Current Position: Pharmacologist,
Food and Drug Administration

Eman Ashour, Ph.D.
Research Assistant Professor, Department of Pharmaceutics and Drug Delivery
School of Pharmacy, University of Mississippi

Kartick Shirour, Ph.D.
Current Position: Analyst,
Medical Marketing Economics, Oxford, MS

Surabhi Shukla, Ph.D.
Assistant Professor
Larkin College of Pharmacy

Surya Lamichhane,, Ph.D.
Research Scientist
Mallincroft